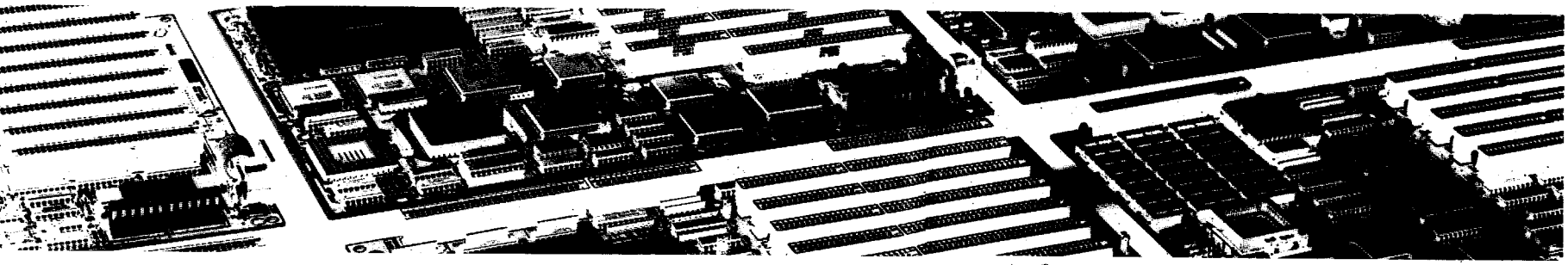
CD-ROM DRIVE UNIT
VERTOS 300 SSD
INSTRUCTION MANUAL



USER'S MANUAL

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Version 1.0
Made in Taiwan

RECYCLABLE

CD-ROM DRIVE UNIT
VERTOS 300 SSD
INSTRUCTION MANUAL

REV. 1.0

Interface: IDE/ATAPI

(English/Germany)

ELITEGROUP COMPUTER SYSTEMS CO., LTD.

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INTRODUCTION

1. FEATURES

- Double rotational speed, 300KBytes/s data transfer rate.
- Half height, 5.25 inch form factor.
- Motorized tray loading, Open/Close is controlled by the EJECT button or by a software command.
- CD-DA, CD-ROM/XA, Photo-CD (Multi-Session), CD-I/CD-Movie Compatible.
- Audio playback capability -- controlled by a software utility or the front panel key switch.
- MPC level 2 compliant.

2. POWER SAVE MODE

- When the drive unit waits for a command from the host for more than five minutes, it enters the power save mode. The spindle motor and laser stop.
- The drive unit restarts automatically when a host command is received.

3. SAFETY NOTICE

- The CD-ROM drive should not be exposed to water or other liquids in order to avoid the danger of electric shock.
- The cover of the CD-ROM drive protects the user from electric shock and the invisible laser radiation. Do not attempt to remove this cover. There are no user serviceable parts inside.

1. PRECAUTIONS FOR INSTALLATION, OPERATION AND HANDLING

1.1 INSTALLATION PRECAUTIONS

1. Do not install the CD-ROM drive in a place where the temperature may exceed the maximum specified operating temperature.
2. Avoid excessively dusty or polluted environments which would tend to make the pickup head lens dirty.

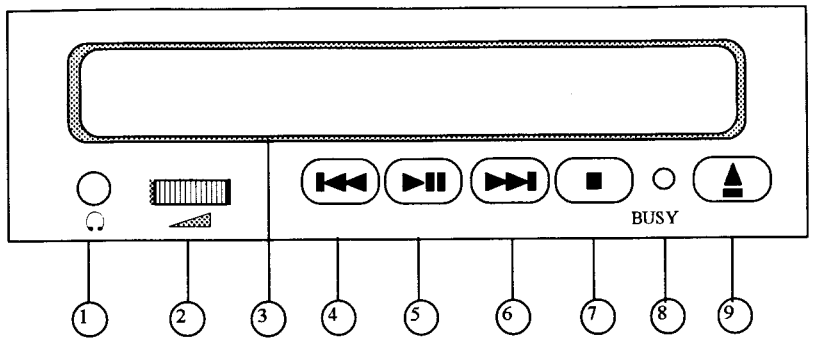
1.2 OPERATION PRECAUTIONS

1. To avoid error, do not move the CD-ROM drive during operation.
2. Do not operate the CD-ROM drive in a high temperature, high humidity environment.
3. When placing a disc in the tray, use care not to touch or scratch its surface.

1.3 HANDLING PRECAUTIONS

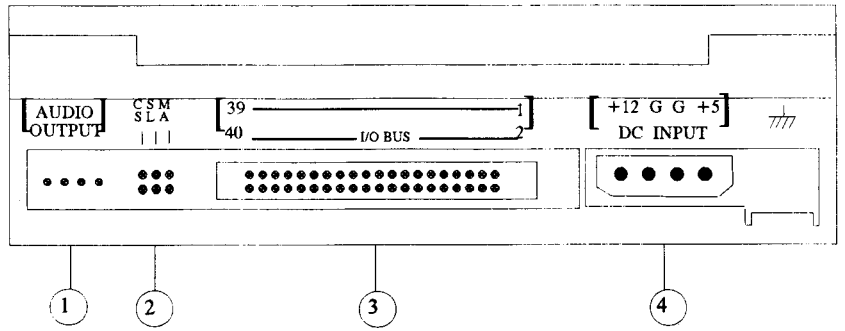
1. Before moving the CD-ROM drive, make sure that the disc has been removed and the tray is closed.
2. To avoid contamination of the disc surface, always handle discs by their edges.
3. Never bend a disc and expose it to direct sunlight.

2.1 FRONT PANEL

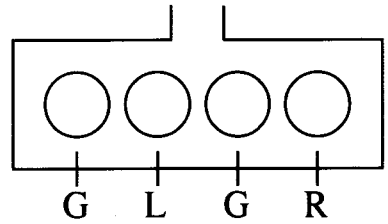


1. EARPHONE JACK - Accepts a 3.5mm stereo mini plug.
2. VOLUME - Adjusts the audio output level.
3. DISC - Opens and closes for disc loading and unloading.
4. PREVIOUS TRACK - Press once to jump to the beginning of the current track. Press twice within two seconds to jump to the previous track.
5. PLAY/PAUSE - Play or pause a music CD.
6. NEXT TRACK - Advances to the next track of a music CD.
7. STOP - Stops playing a music CD.
8. BUSY INDICATOR - Lights up when data is being accessed from a disc, or when the drive is playing audio.
9. EJECT BUTTON - Eject disc inserted in drive unit.

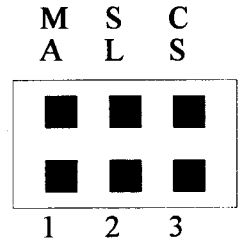
2.2 REAR PANEL



1. AUDIO LINE - OUT CONNECTOR - Two channels, left and right audio outputs.



2. DRIVE MODE SELECT JUMPERS - To determine the drive mode (Master of Slave).



Drive Mode	Jumper connections	
	1	2
Master	x	
Slave		x

Note : The factory default is the Slave mode.

3. INTERFACE CONNECTOR - For connecting to host adapter card with 40-conductor data cable.
4. DC (IN) CONNECTOR - To be connected to a standard power supply.

3. SPECIFICATIONS

3.1 PERFORMANCE

(1) Disc diameter	12cm, 8cm
(2) Disc speed	200 ~1060 rpm (CLV)
(3) Disc Capacity	660 MBytes (mode 1, 12cm disc)
(4) Data transfer rate	300 KBytes/s (double speed)
(5) Access time (Double speed)	
Random average	350 ms*
Full stroke average	700 ms
(6) Buffer Size	128 KBytes

* Average of 300 access operations, between 15-min 00-sec 00-block and 35-min 00-sec 00-block, with latency and layer error correction time.

3.2 ERROR RATES

Soft read errors	Less than 10^{-9}
Hard read errors	Less than 10^{-12}

3.3 AUDIO PERFORMANCE

(1) Number of channels	2
(2) Frequency response	20Hz ~20KHz
(3) S/N ratio	80dB
(4) Distortion	<0.2% (1KHz)
(5) Output level	
Line out	0.8Vrms
Head phone	0.6Vrms

3.4 GENERAL PERFORMANCE

(1) Power requirements		
Voltage	DC+5V ±5%	DC+12V ±10%
Current	350mA(max.)	1.5A(max.)
(2) Dimensions		
(WxHxD)	146mm x 41.3mm x 203mm	
(3) Weight	980 g.	2.16lb.

3.5 ENVIRONMENTAL CONDITIONS

MTBF	25,000 POH	
	OPERATING	NON-OPERATING
Temperature	+5 ℃ to +45 ℃	-20 ℃ to +60 ℃
Humidity	20% to 85%	8% to 90%
	(No condensation)	(No condensation)
Shock	2G	30G
Vibration	0.2G (5 to 50Hz)	1.25G (10 to 50Hz)

Specifications subject to change without notice.

4. HARDWARE INSTALLATION

Before beginning installation, please check to make sure that all of the following items were included with your CD-ROM package.

1. CD-ROM drive unit
2. Installation diskette
3. Audio cable
4. Screws

4.1 CD-ROM DRIVE INSTALLATION

1. Remove the cover from an unused 5.25" half-height drive bay on the computer and remove the screws and brackets from both sides of the drive bay.
2. Slide the CD-ROM drive into the slot and secure the drive in place either with the screws and brackets from your computer or the mounting screws provided with this drive.

4.2 CABLE INSTALLATION

1. Connect the 40-conductor data cable to the CD-ROM drive and IDE/ATAPI interface card.
2. Plug the power supply cable into the CD-ROM drive 4-pin white connector.

5. GUIDE TO OPERATION

This CD-ROM device software is compatible with MS-DOS version 3.1 or later. The installation diskette contains the software needed to install and operate the CD-ROM drive.

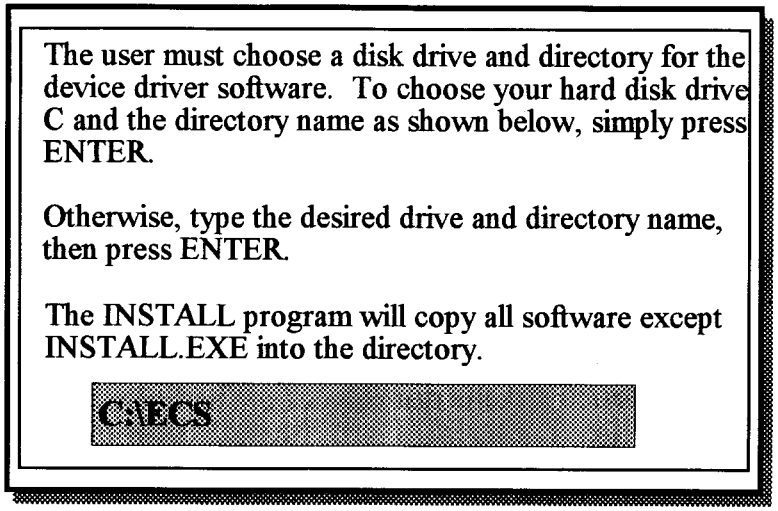
ECSCDIDE.SYS	CD-ROM device driver
INSTALL.EXE	Auto installation software for CD-ROM drive setup.
CDPLAY.EXE	Utility for CD-Player which allows the user to play audio CD.

5.1 PREREQUISITE FOR INSTALLATION

1. For user with MS-DOS version equal or above 6.0
   a. Copy the MSCDEX.EXE (in DOS directory) onto the installation diskette that comes from this drive.
2. For user with MS-DOS version under 6.0
   a. Contact local proper representative to obtain a copy of MSCDEX.EXE file (version 2.22 or above).
   b. Copy the MSCDEX.EXE file onto the installation diskette that comes from this drive.

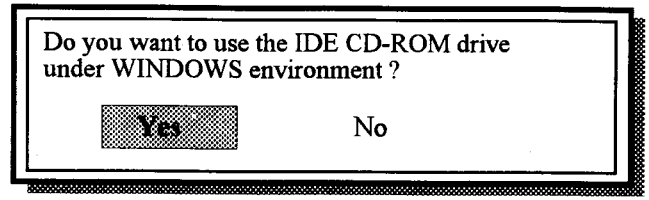
5.2 CD-ROM DEVICE DRIVER INSTALLATION

1. Insert the installation diskette in drive A or B.
2. Change the prompt to A:\> or B:\>.
3. Type INSTALL and press ENTER.
4. The following display will be shown.

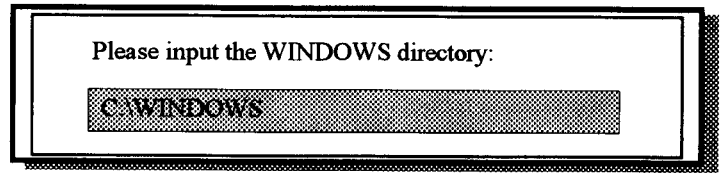

The user must choose a disk drive and directory for the device driver software. To choose your hard disk drive C and the directory name as shown below, simply press ENTER.
Otherwise, type the desired drive and directory name, then press ENTER.
The INSTALL program will copy all software except INSTALL.EXE into the directory.
C:\ECS

147

5. Follow the instructions and complete the directory choice by pressing ENTER. The next display that will appear is

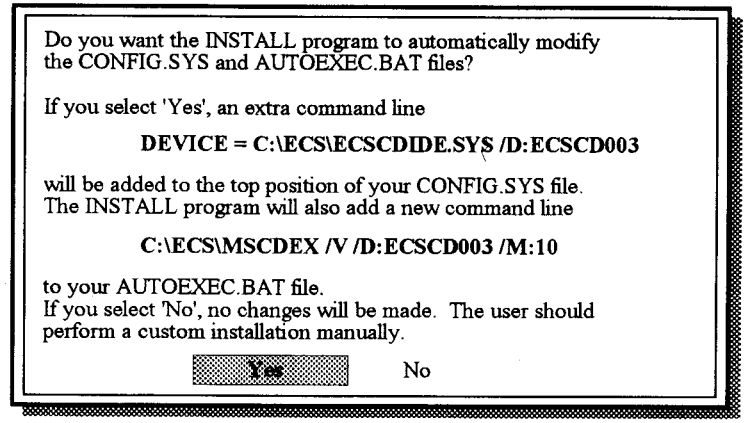


6. If you select YES, the following display will be shown.

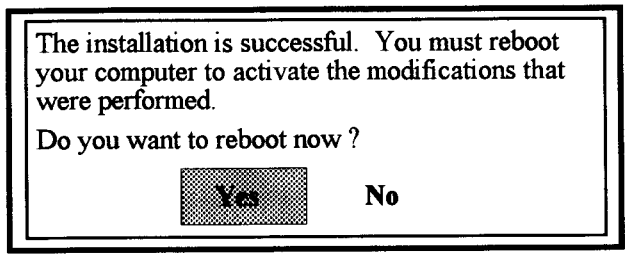


Otherwise you will jump directly to step 7.

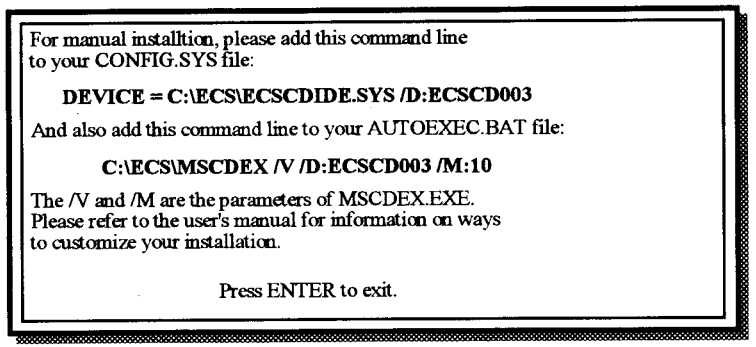
7. At this point, the installation procedure has been prepared and you will see the following display.


Do you want the INSTALL program to automatically modify the CONFIG.SYS and AUTOEXEC.BAT files?
If you select 'Yes', an extra command line
DEVICE = C:\ECS\ECSCDIDE.SYS /D:ECSCD003
will be added to the top position of your CONFIG.SYS file.
The INSTALL program will also add a new command line
C:\ECS\MSCDEX /V /D:ECSCD003 /M:10
to your AUTOEXEC.BAT file.
If you select 'No', no changes will be made. The user should perform a custom installation manually.
Yes
No

If you select YES then press ENTER, the INSTALL program will add an extra command line
DEVICE=C:\ECS\ECSCDIDE.SYS /D:ECSCD003
to the first position of your CONFIG.SYS file and a new command line
C:\ECS\MSCDEX /V /D:ECSCD003 /M:10
to your AUTOEXEC.BAT file. After the modification procedure is completer, the final display below will be shown.


The installation is successful. You must reboot your computer to activate the modifications that were performed.
Do you want to reboot now ?
Yes
No

If, instead, you select NO, this display will be shown


For manual installtion, please add this command line to your CONFIG.SYS file:
DEVICE = C:\ECS\ECSCDIDE.SYS /D:ECSCD003
And also add this command line to your AUTOEXEC.BAT file:
C:\ECS\MSCDEX /V /D:ECSCD003 /M:10
The /V and /M are the parameters of MSCDEX.EXE.
Please refer to the user's manual for information on ways to customize your installation.
Press ENTER to exit.

Press ENTER to exit. After this modification procedure, it is necessary to reboot your computer.

5.3 DEVICE DRIVER (ECSCDIDE.SYS) PARAMETER LIST

The device driver is installed with an entry in CONFIG.SYS. The syntax of this entry is:

DEVICE=ECSCDIDE.SYS [/D:<*device_name*>] [/P:<*port address*>] [/I:<*IRQ number*>]

where the arguments are:

/D:<*device_names*> The character device name that will be used by MSCDEX.EXE to find and communicate with the device driver (default is "ECSCD003").

/P:<*port address*> The port address to be used to communicate with the card. If this parameter is omitted, the device driver will scan port address automatically during initialize process.

/I:<*IRQ number*> The IRQ number to be used by the IDE card. If this parameter is omitted, the device driver will set the IRQ number to default value according the port address. If the port address is 1F0h (primary IDE), the default IRQ number is 14. If the port address is 170h (secondary IDE), the default IRQ number is 15.

5.4 MICROSOFT CD-ROM EXTENSIONS PARAMETERS

Microsoft CD-ROM Extension (MSCDEX.EXE) is an executable program for MS-DOS (version 3.1 or higher) that works in conjunction with the device driver to allow your computer to access CD-ROM discs in the CD-ROM drive as if they were MS-DOS formatted disks. This program is written by Microsoft and is specifically designed to work with the Microsoft designed operating system commonly called MS-DOS.

Computers with MS-DOS 'compatible' operating systems may experience unpredictable results unless the operating system manufacturer provides an alternative to the MSCDEX program.

The setup program automatically modifies the autoexec.bat file so that your computer can access the CD-ROM drive. However, there are some parameters that can be changed if you wish. This section explains the function of each parameter. Use a text editor, such as MS-DOS 'EDLIN' or 'EDIT', to modify the appropriate line in your AUTOEXEC.BAT file.

The syntax of the MSCDEX.EXE entry in AUTOEXEC.BAT is:

[drive:][path] MSCDEX.EXE /D:device name [/M:n] [/E] [/V] [/L:drive letter]

Note: The actual MSCDEX.EXE command line in the AUTOEXEC.BAT file is not truncated and should be placed entirely on one line.

[drive:][path] MSCDEX.EXE

Specifies the location (drive and directory) of the MSCDEX.EXE file.

The default setting is the ECS directory of the boot drive.

/D: device name

Specifies the name of the CD-ROM drive (8 characters maximum).

This must be identical to the device name specified in the device driver in the CONFIG.SYS file. For example:

C:\ECS\MSCDEX.EXE /D:ECSCD003

[/M:n]

Specifies the number of sector buffers for temporary storage of the most recent disc data. For example to specify four sector buffers you would use:

C:\ECS\MSCDEX.EXE /D:ECSCD003 /M:4

The installation program will set this value to 10.

The default value is 4.

Note : The greater this value, the better the CD-ROM drive will perform. However, each buffer uses about 2k of memory and specifying too many buffers may slow down computer operation or interfere with other programs which have large memory usage requirements. Using expanded memory (see the /E option in this section) or loading MSCDEX.EXE into high memory (refer to your MS-DOS User's Manual or Memory Manager User's Manual) may allow you to specify a larger number of buffers to enhance CD-ROM performance and operate programs with large memory usage requirements simultaneously.

[/E]

Instructs the computer to use expanded memory, if available. For example:

C:\ECS\MSCDEX.EXE /D:ECSCD003 /E

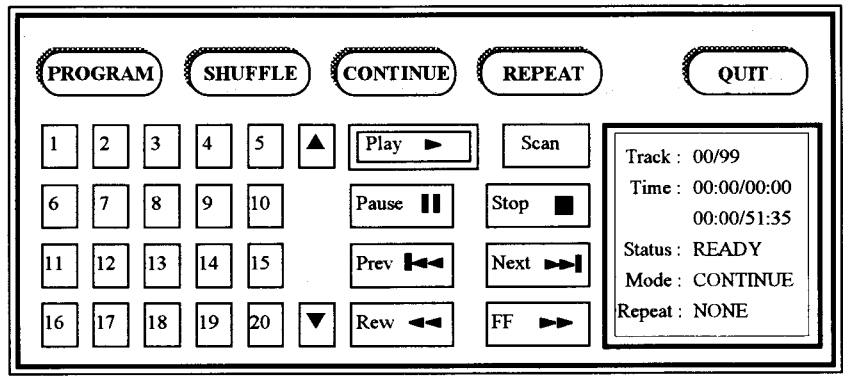
Note that you must first load an expanded memory driver before using this option. If no expanded memory driver is loaded, the following error message appears:

Expanded memory not present or not usable.

6. USING YOUR CD-ROM AS AN AUDIO CD PLAYER

6.1 HOW TO OPEN THE COMPACT DISC PLAYER UTILITY

1. Change to the directory which contains the CDPLAY.EXE file, (default is C:\ECS) then type CDPLAY and press ENTER.
2. A compact disc control panel will be shown on the screen as follows:

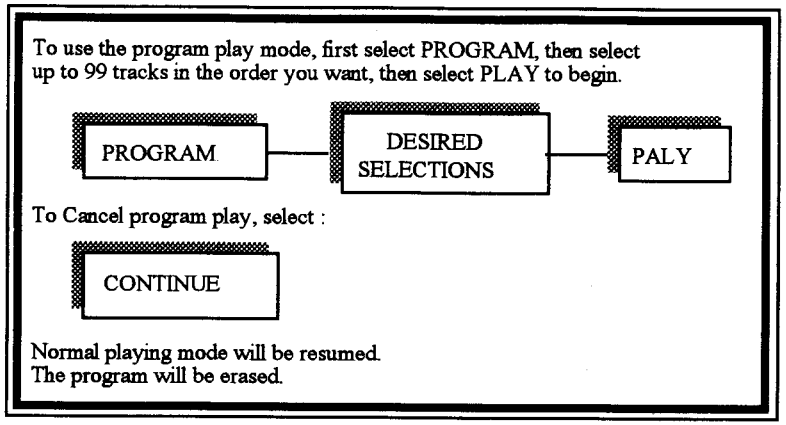


It can be operated with a mouse or the arrow keys of the keyboard.

6.2 USER'S GUIDE FOR MAIN FUNCTIONS

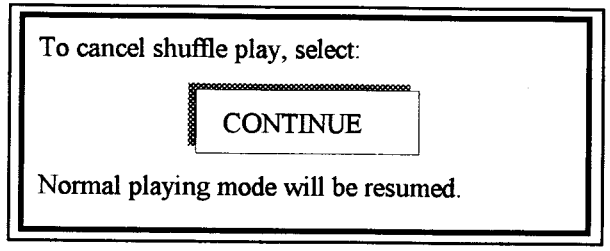
1. Program play

In the program play mode, the control panel shown above can be used to play up to 99 selections in an order you specify.


To use the program play mode, first select PROGRAM, then select up to 99 tracks in the order you want, then select PLAY to begin.
PROGRAM
DESIRED SELECTIONS
PALY
To Cancel program play, select :
CONTINUE
Normal playing mode will be resumed.
The program will be erased.

2. Shuffle play

Playing in a random order, the unit will play all the selections or just the selections you desire. To play only desired selections in random mode, you can delete the undesired selections before or during play.



3. Repeat play

REPEAT play has three sub-modes.

REPEAT NONE : To cancel REPEAT play.

REPEAT TRACK : To repeat the current track.

REPEAT DISC : To repeat all selections in disc, or to repeat all selections in your program play or shuffle play.

7. MAINTAINENCE & TROUBLE SHOOTING

7.1 COMMONLY ENCOUNTERED PROBLEMS AND THEIR SOLUTIONS

If the CD-ROM drive does not operate properly, check to see:

1. Are both ends of the all cables securely attached? Are any of the cables frayed or damaged?
2. Is the disc inserted correctly? The label must be facing up.
3. If any other hardware add-on cards are installed in the computer, are they using the same address port as the CD-ROM drive? If so, there will be a hardware conflict which you can solve by reconfiguring the address port of the CD-ROM drive.

If no sound comes from the speakers:

1. Have the connections between the LINE OUT jacks and the input terminals of the amplifier and/or speakers been properly made?
2. Is power to the amplifier and/or speakers turned on?

If no sound comes form headphones:

1. Are the headphones properly connected to the headphone jack? Is the headphone cord frayed or damaged?
2. Is the volume adjustment (on the front panel) set properly?

CD-ROM LAUFWERK
VERTOS 300 SSD
BEDIENUNGSANLEITUNG

Interface: IDE/ATAPI

ELITEGROUP COMPUTER SYSTEMS CO., LTD.